

REMARKS

This is a supplemental amendment filed in response to the Office Action of December 23, 2004 and the telephone interviews of May 24, 2005 and June 10, 2005.

I. Telephone Interviews

Claims 1 to 8 were found to be allowable for the reasons given on page 3 of the Office Action of December 23, 2004.

An amendment was filed on April 22, 2005 in which no changes were made in claims 1 to 8 the withdrawn apparatus claims 9 to 16 were canceled and a new additional independent claim 17 was filed, which was identical to allowed claim 1, except that step a) was been changed somewhat to state that the facing surface of the flat glass or glass ceramic article rests fully on the planar support except in the shaping region of the planar support, which is basically the through-going holes through which the dies press on the facing surface of the flat article in operation.

In other words, the wording of claim 1 did not appear to be supported by the specification, if interpreted in a strict literal sense. The flat glass or glass ceramic article does rest fully on the planar support and over the through-going holes through which the dies press in operation during the method. New claim 17 was drafted to correct this deficiency in claim 1, which amounted to a formal

wording problem in claim 1.

During the telephone interview of May 24, 2005, the Examiner indicated that the present application still contains allowable subject matter, but that she agreed that claim 1 appeared to have formal deficiencies if the wording is strictly interpreted and thus should be canceled. Also new claim 17 appeared to be not clearly distinguishable from the disclosures in the prior art reference, Schaffernicht, et al.

II. Claim Changes

For the foregoing reasons claims 1 and 17 have been canceled and a new main independent claim 18 that is more clearly distinguishable from the disclosures in Schaffernicht, et al, has been provided above. The distinguishing wording in the new independent claim 18 is pointed out in the next section.

Also note that the term "a predetermined displaced position" has been changed to "at least one predetermined displaced position" (see page 9, lines 4 to 8, of the U.S. specification). This change and others have basis on page 8, line 20 and following of the U.S. specification.

The remaining dependent claims 2 to 8 were amended, so that they now depend on the new independent claim 18.

Also the wording of dependent claims 6 and 7 was changed to better describe the embodiments of the method claimed by those claims. Claim 6 contained inappropriate apparatus type wording, "means for", and that wording has been deleted from claim 6. Claim 7, which depends on claim 6, has been amended in a suitable manner.

III. Claim 18 is Allowable over US 4,047,915

The reasons for now allowing the new claim 18 include those of paragraph 5 on page 3 of the Office Action of December 23, 2004. Basically applicants disclose and claim a method in which a flat glass sheet is placed on a planar support plate with its entire facing surface resting fully on the planar support plate and over a through-going hole in which there is a shaping die that contacts the facing surface. In other words, the flat glass article is placed on the planar support plate so that its lower surface either contacts the upper surface of the support plate or is over a through-going hole. During shaping the shaping die is raised to partially shape the flat glass sheet, after heating softens it sufficiently, and at the same time the flat glass sheet is held on the planar support plate by producing a vacuum under it.

Schaffernicht, et al, disclose an apparatus for manufacturing a vacuum envelope, or parts of same, e.g. for a television tube. In the method of shaping a glass plate 11, the glass plate is clamped at several points around its periphery by a clamping device 10 (claim 1, column 5, line 36, and column 3, lines 49 to 58). The clamping device 10 does have surfaces that appear to be horizontal to support the edges of the glass plate, however it is not equivalent to the planar support plate of the new claim 18. The clamping device 10 is clearly not a planar support plate, but instead it is a device the grips the edges of the glass plate as shown in figure 2 of the reference.

Applicants do not clamp the glass or glass ceramic sheet being shaped

but instead produce a low pressure or vacuum under the planar support plate which acts through the gap between the planar support plate and the shaping die to hold the glass or glass ceramic sheet on the planar support plate so that its lower plane surface contacts the upper surface of the planar support plate or the upper surface of the shaping die in operation.

The stresses in the glass or glass ceramic sheet produced by clamping its edges or using clamps according to Schaffernicht, et al, would be disadvantageous and might cause breakage or fracture if sufficiently large. Applicants' method of holding the sheet on the support with a low pressure or vacuum produces a less stresses in the entire glass or glass ceramic sheet or article during shaping

There is no disclosure in Schaffernicht, et al, of an apparatus and method in which a low pressure or vacuum is applied to the glass or glass ceramic sheet so as to hold it on a planar support plate during shaping. Figure 6 does show applying a vacuum to a semi-finished front dish of the vacuum envelope to hold it in place while the rim is sawed off from it, however this step is subsequent to shaping the front dish and does not occur at the same time.

Furthermore while the apparatus described in Schaffernicht, et al, might be modified to apply a vacuum to the glass sheet during shaping, there does not appear to be any disclosure of that in the specification. Because parts of a vacuum envelope are being made does not mean that a vacuum is used to make those parts. The methods described in the disclosure of Schaffernicht, et al, are methods to make and shape parts of the vacuum envelope, but the disclosure

does not show how these parts are connected with each other to make e.g. a television tube. Furthermore these methods appear to operate by clamping the glass sheet, heating it in the apparatus of fig. 2 of the reference and then deforming it apparently without applying a vacuum at the same time. See the claims of this US Patent reference.

None of the method claims of the Schaffernicht reference mention applying a low pressure or overpressure at the same time as deformation with the stamp.

Summarizing claim 18 contains the following distinguishing features and thus is neither anticipated nor obvious from Schaffernicht, et al:

(1) the providing step a) of claim 18 is limited to an apparatus that is neither anticipated nor obvious from Schaffernicht, et al: it comprises a planar support plate with a through-going hole in which a shaping die is arranged so that its upper surface is level with the upper surface of the planar support plate in an initial position (see page 8, line 20, to page 9, line 8, for support in applicants' specification);

(2) according to step b) of claim 18 the entire facing surface of the glass or glass ceramic article rests on the planar support plate and over the at least one through-going opening -- the glass sheet is clamped along its edges with a clamping device in the reference -- and according to step c of claim 18 the gap between the shaping die and the support plate is such that a low pressure produced under the support plate is sufficient to hold the glass or glass ceramic article on the support plate -- in contrast in the Schaffernicht reference low pressure

is not used to hold the glass plate, but instead it is clamped at the edges which produces stresses;

(3) according to step e) of claim 18 the shaping takes place at the same time as applying the low pressure – which is different from Schaffernicht, et al, since there is no disclosure of applying low pressure at the same time as shaping, only after the shaping process during rim trimming.

For the foregoing reasons and because of new wording in claim 18 allowance of the new claim 18 and the amended dependent claims 2 to 8 over U.S. Patent 4,047,915 is respectfully requested.

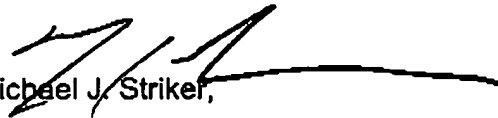
IV. German Patent Granted

A German patent has issued based on the German Patent Application, DE 101 10 357 C2, which is the priority document for the present application. A copy accompanies this amendment.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549 4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,



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